DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028037
Date Inspected: 24-Jul-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 900
OSM Departure Time: 1930
Location: Job Site

CWI Name: William Sherwood and Bernie Doceval

CWI Present:	☑ Yes	☐ No					
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS Tower

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

This QA was tasked by Lead QA Danny Reyes to perform visual test (VT) on completely welded drop in plate at OBG 13E. During the VT, the bottom sides of the welded butt joints were noted smoothly flush ground, free from weld defects and deemed visually acceptable. The following OBG E13 drop-in plate butt joints were 100% visually verified by this QA;

1. 13E-E2.3@0-3910mm - Visually acceptable
2. 13E-PP120.6@0-1000mm - Visually acceptable
3. 13E-E2.4@0-2600mm - Visually acceptable
4. 13E-PP121.2@0-1000mm - Visually acceptable
5. 13E-E2.5@0-4720mm - Visually acceptable
6. 13E-PP122.2@0-8600mm - Visually acceptable
7. 13E-E2.8@0-11970mm - Visually acceptable
8. 13E/14E-A1@0-5500mm - Visually acceptable
9. 13E/14E-A0@280mm - Visually acceptable
10. 13E-E2.2@0-4850mm - Visually acceptable
11. 13E-PP123.6@0-1000mm - Visually acceptable
12. 13E-E2.1@0-9500mm - Visually acceptable

13. 13E-PP121.6@0-2175mm - No access

The following welding activities were turned over by fellow QA Matt Daggett and Fritz Belford during the shift;

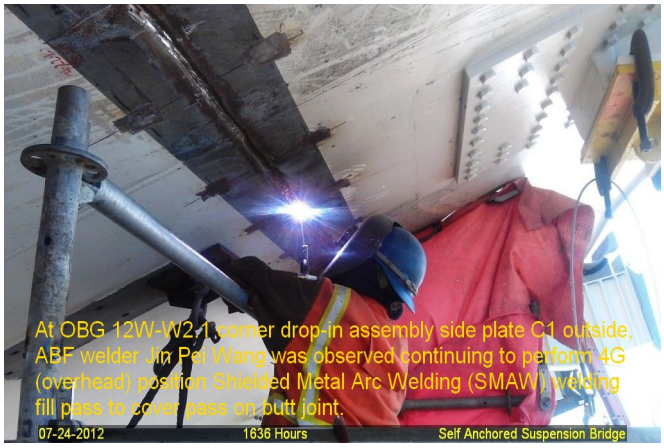
At OBG 13W-W2.1@10,100 drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Rick Clayborn perform CJP groove welding repair from location Y=7000mm to Y=9500mm. The welder was observed welding in the 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1004-Repairs. Since the area from Y=7000mm to Y=9500mm has numerous UT detected defects with various sizes and depths, the welder decided to excavate the whole length between two floor beams PP123 and PP123.5. The repair excavation was preheated to more than 325 degree Fahrenheit using Miller Proheat 35 Induction Heating System with the heater blanket put in plate on top of the deck prior/during welding. During the shift, ABF QC Bernie Docena was noted monitoring the welder with measured working current of 130 amperes on 3.2mm E7018H4R electrode. At the end of the shift, repair welding at location mentioned above was partially completed and the welder performed the Post Weld Heat Treatment (PWHT) of 450°F where repair was completed and held it for one hour as required.

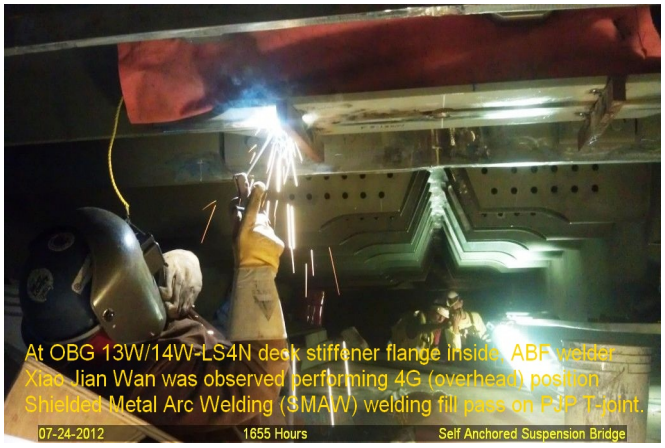
At OBG 12W-W2.1 corner drop-in side plate ‘C1’ outside, QA randomly observed ABF/JV qualified welder Jin Pei Wang continuing to perform CJP groove (splice) back welding fill pass to cover pass on the splice butt joint from Y=24,000mm to Y=26,000mm. The welder was observed perform manual welding in the 4G (overhead) position utilizing a Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-Cu. The joint being welded has a single V-groove butt joint with copper backing bar that has been removed, back gouged and ground. During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder with measured working current of 130 amperes. At the end of the shift, cover pass welding at location mentioned above was still continuing and should remain tomorrow.

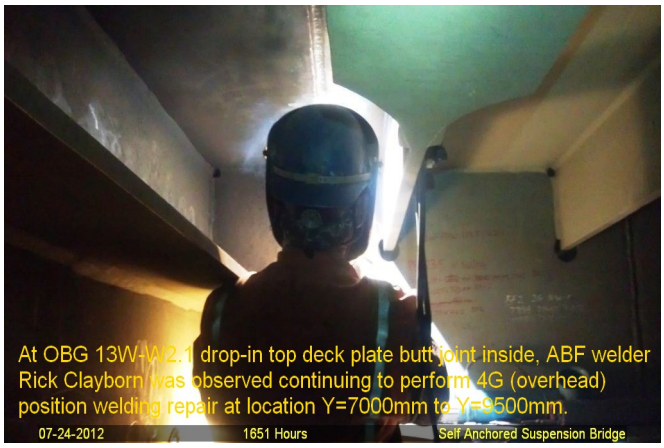
At OBG 13W/14W-LS4N deck stiffener flange inside, QA randomly observed ABF/JV qualified welder Xiao Jian Wan perform PJP groove welding root pass to fill pass on the T-joint. The welder was observed perform manual welding in the 4G (overhead) position utilizing a Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E9018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1162-4. The joint has a bevel groove T-joint being welded to the longitudinal stiffener. The plates were preheated to more than 200 degree Fahrenheit using Miller Proheat 35 Induction Heating System. During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder with measured working current of 125 amperes. At the end of the shift, fill pass welding at location mentioned above was still continuing and should remain tomorrow. The welder held the same preheat of >200 degree Fahrenheit for three hours after welding as required.

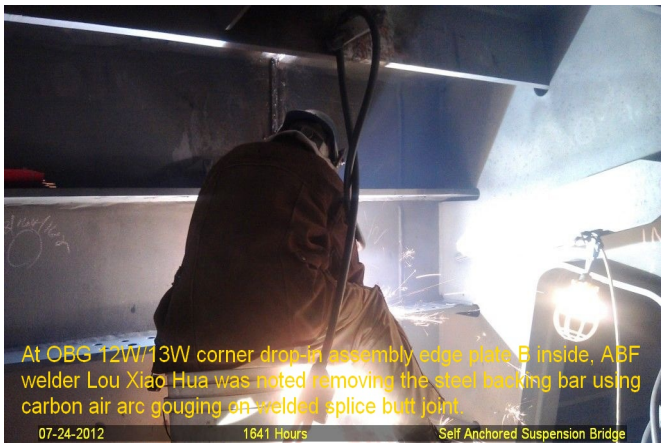
WELDING INSPECTION REPORT

(Continued Page 3 of 3)









Summary of Conversations:

No significant conversation ocurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer